The Color of COVID-19: Structural Racism and the Pandemic's Disproportionate Impact on Older Racial and Ethnic Minorities

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Abstract

Objectives: The aim of this evidence-based theoretically informed essay is to provide an overview of *how* and *why* the COVID-19 outbreak is particularly detrimental for the health of older Black and Latinx adults.

Methods: We draw upon current events, academic literature, and numerous data sources to illustrate how biopsychosocial factors place older adults at higher risk for COVID-19 relative to younger adults, and how structural racism magnifies these risks for older Black and Latinx adults.

Results: We identify three proximate mechanisms through which structural racism operates as a fundamental cause of racial/ethnic inequalities in COVID-19 burden among older adults: (1) Risk of exposure; (2) Weathering processes; and (3) Health care access and quality.

Discussion: While the ongoing COVID-19 pandemic is an unprecedented crisis, the racial/ethnic health inequalities among older adults it has exposed are long-standing and deeply rooted in structural racism within American society. This knowledge presents both challenges and opportunities for researchers and policymakers as they seek to address the needs of older adults. It is imperative that federal, state, and local governments collect and release comprehensive data on the number of confirmed COVID-19 cases and deaths by race/ethnicity and age to better gauge the impact of outbreak across minority communities. We conclude with a discussion of incremental steps to be taken to lessen the disproportionate burden of COVID-19 among older Black and Latinx adults, as well as the need for transformative actions that address structural racism in order to achieve population health equity.



The United States (U.S.) is now the epicenter for the novel coronavirus disease (COVID-19) pandemic, leading the world in the number of confirmed infections and deaths (Dong, Du, & Gardner, 2020). As of the end of July 2020, there have been over 4.3 million cases and 147,000 deaths as a result of COVID-19 in the U.S. (Hopkins, 2020). Since initial detection of the coronavirus in the state of Washington on January 19, 2020, the number of reported cases has risen rapidly (Holshue et al., 2020). The spread of the coronavirus has varied geographically, with populous states such as New York, California, New Jersey, Illinois, Texas, and Florida hit particularly hard. As the pandemic began to unfold, local and state governments issued "shelter in place" and "social and physical distancing" mandates aimed at suppressing transmission of the coronavirus. Following an overall flattening of the curve nationwide, most states began reopening their economies and easing social distancing restrictions during the summer months. Despite some progress in reducing the number of COVID-19 deaths, new hotspots continue to emerge, and the recent surge in outbreaks across the nation raises serious concerns for the upcoming fall and winter, particularly during influenza season.

As the COVID-19 outbreak rapidly evolves, identifying key factors that impact population health outcomes is crucial for formulating effective responses to the ongoing crisis. Questions regarding which segments of U.S. society are at an elevated risk for severe illness and death from the coronavirus—and *how* and *why*—are central to understanding and addressing disparities in COVID-19 health outcomes. Evidence regarding which subpopulations are susceptible to the coronavirus reveals two key patterns: 1) COVID-19 is particularly detrimental for the health of older adults, as evidenced by their disproportionately high rates of hospitalizations and mortality from the virus (Bialek et al., 2020; Garg et al., 2020); and 2) older Black and Latinx communities are particularly hard hit by the pandemic (CDC, 2020a; Millett et

al., 2020; Rodriguez-Diaz et al., 2020). Figure 1 illustrates COVID-19 death rates per 100,000 population as of June 17, 2020 by age group for the total U.S. population and by race/ethnicity for adults aged 65 and older. Results indicate that adults aged 65 and older are more than seven times as likely as younger adults to die from COVID-19 (Panel A). Among older adults, Blacks and Latinxs have death rates approximately three and two times higher than Whites, respectively (Panel B).

[FIGURE 1]

In order to understand racial/ethnic disparities in COVID-19 health outcomes among older adults, it is important to consider how social and historical contexts contribute to different levels of risks over time. Notably, current cohorts of older Blacks and Latinxs came of age during the Jim Crow era and consequently have endured overt and de jure racism as well as more contemporary subtle and de facto forms of racism (Bonilla-Silva, 1997). Contemporary structural racism involves "macrolevel systems, social forces, institutions, ideologies, and processes that interact with one another to generate and reinforce inequities among racial and ethnic groups" (Gee & Ford, 2011:116). Both theoretical and empirical research provide compelling evidence of contemporary structural racism in a myriad of societal domains, including (but not limited to) education, employment, housing, criminal justice, and health care systems (Feagin & Bennefield, 2014; Gee & Ford, 2011).

Given their experiences -- both past and present -- living within a U.S. social system where myriad opportunities and risks are unequally distributed across the color line (Bonilla-Silva, 1997), it is not surprising that older Blacks and Latinxs experience an accumulation of health disadvantages vis-à-vis Whites (Boen, 2019). Indeed, research has identified racism as a fundamental or root cause of health inequalities (Phelan & Link, 2015; Williams, Lawrence, &

Davis, 2019). Fundamental Cause Theory highlights how structural racism harms the health of racial/ethnic minorities through a number of replaceable intervening mechanisms, including constraining opportunities for avoiding risks and obtaining health-promoting resources, such as socioeconomic resources (e.g., education, occupation, income and wealth) and flexible resources (e.g., power, prestige, freedom, neighborhood context, and health care). These processes apply to an array of health conditions—including infectious diseases like COVID-19 (Laster Pirtle, 2020; Phelan & Link, 2015). Below we discuss *how* proximate mechanisms place older Blacks and Latinxs at an elevated health risk from the COVID-19 pandemic compared to Whites, while also highlighting examples of *why* structural racism is a fundamental driver of these inequalities.

We begin by briefly highlighting biopsychosocial factors that put older adults at higher risk than younger adults during the COVID-19 crisis. Next, we provide evidence on racial/ethnic inequalities in three proximate factors that contribute to adverse population health outcomes due to the COVID-19 pandemic: (1) Risk of exposure; (2) Weathering processes; and (3) Health care access and quality. Importantly, by reviewing empirical evidence on how structural racism is a fundamental cause of racial/ethnic inequalities in risks, resources, and health (Laster Pirtle, 2020; Phelan & Link, 2015; Williams et al., 2019), we further elucidate **why** these inequalities are produced and maintained, and suggest how they can potentially be addressed.

COVID-19 and Older Adults

The COVID-19 outbreak is particularly detrimental to older adults, impacting their well-being both directly and indirectly. In terms of direct effects of the pandemic, aging processes involve *immunosenescence*—age-related changes to the immune system which lead to increased morbidity and mortality rates due to infectious diseases (Nikolich-Žugich, 2018). Evidence

indicates that older adults with underlying comorbidities are at an elevated risk of COVID-19 infection due to comprised immune systems and are more likely to develop severe complications from exposure to the virus which results in a higher risk for mortality (Bialek et al., 2020; Garg et al., 2020). In addition, older adults with underlying comorbidities may be at a higher risk of contracting and spreading the virus as they may require physical interactions with healthcare providers or reside in long-term care and assisted living facilities (CDC, 2020).

The pandemic can also indirectly harm older adults. For example, to the extent that older adults forgo medical care and prescriptions due to fears of contracting COVID-19, they are likely to experience increased health problems and mortality from otherwise manageable chronic conditions (Girdhar, Srivastava, & Sethi, 2020). Moreover, physical distancing measures among older adults, particularly those who live alone, may result in social and psychological isolation and thereby increase negative mental health outcomes, including anxiety, depression, loneliness and difficulty coping with stressors in a time of crisis (Girdhar et al., 2020). Although older adults are disproportionately impacted by the pandemic, not all older adults experience the pandemic with the same set of (dis)advantages. Highlighting which older adults face systemic (dis)advantages is important to contextualize differing risks, resources, and health profiles (Ferraro, Kemp, & Williams, 2017).

Risk of Exposure to COVID-19

As COVID-19 is an infectious disease, conditions in which people live and work are primary factors determining risk of exposure. Structural racism in the forms of residential and occupational segregation (i.e. the unequal distribution of racial/ethnic groups across neighborhoods and jobs) and wealth inequalities shape living and working conditions in ways that put Blacks and Latinxs at greater risk of COVID-19 exposure and limit their ability to

practice physical distancing (Ray, 2020). Residential segregation stems from both historical and contemporary forms of discriminatory government policies (e.g., exclusion from financial benefits of the New Deal and GI Bill) and institutional practices (e.g., unfair lending, redlining and blockbusting) (Massey & Denton, 1993; Sewell, 2016). Compared to predominately White neighborhoods, majority Black or Latinx neighborhoods are more likely to be harmful ecological environments, characterized by densely populated areas, concentrated economic disadvantage, high crime rates, few healthy food options and green spaces, and subpar housing (Massey & Denton, 1993; Sewell, 2016). Research has shown that neighborhood conditions are particularly salient for the health and well-being of older adults (Cagney, Browning, & Wen, 2005). Due to constrained mobility, older Blacks and Latinxs adults are more likely to be exposed to unhealthy environments which contribute to adverse health outcomes over time. Racial/ethnic segregation of nursing homes also puts older Blacks and Latinxs at greater risk than Whites of exposure to COVID-19. Although fewer Blacks and Latinxs than Whites reside in long-term care facilities, minorities are concentrated in predominantly non-White facilities with lower quality and cleanliness (Howard et al., 2002). As of May 16, 2020, 60% of nursing homes where at least a quarter of residents are Black or Latinx had at least 1 COVID-19 case, while only 30% of homes with almost entirely White (<5% Black or Latinx) residents had a case (Gebeloff et al. 2020). Finally, Blacks and Latinxs are also overrepresented among the jail/prison population, subjecting them to crowded and unhygienic living quarters (CDC, 2020c). These living conditions make it more difficult to practice preventive measures and go about routine daily activities without risk of COVID-19 exposure.

Large racial/ethnic wealth gaps and occupational segregation are also likely to contribute to elevated COVID-19 risks for older Blacks and Latinxs. Whereas older White households have

an average net worth of \$258K, the averages for older Black and Latinx households are only \$13k and \$39k, respectively (Brown, 2016). Thus, it is not surprising that older Blacks and Latinxs are more likely to live in crowded, multi-generational households than Whites (Vespa, Lewis, & Kreider, 2013), which likely increases their risk of exposure to COVID-19 due to limited space to isolate from household members who have been exposed or infected. Moreover, many older Blacks and Latinxs must continue working outside the home despite outbreaks in their communities due to economic necessity, increasing their risk of exposure. Black and Latinx adults are overrepresented in high-contact occupations in food, retail, service, transportation, and health industries that have been categorized as "essential." For example, Blacks and Latinxs both represent approximately 25% of service industry workers, and 16% of production and transportations workers compared to 16% and 11% for Whites, respectively (U.S. Bureau of Labor Statistics, 2019). These occupations are less likely to have paid sick leave which can increase exposure to COVID-19 for workers and their families every time they go to work, particularly those who rely on public (i.e. crowded) transportation (Ray, 2020). Blacks and Latinxs are also less likely to work remotely than Whites (18% and 13% compared to 26%, respectively) (U.S. Bureau of Labor Statistics, 2019). Thus, "shelter in place" mandates to reduce transmission of COVID-19 may be less protective for older Blacks and Latinxs than Whites as they are less likely to have access to healthy housing, paid sick leave, and often lack flexible work arrangements that allow them to work from home (Gould & Shierholz, 2020).

Weathering Processes

Not only are older Blacks and Latinxs at higher risk of exposure to COVID-19, they are also more likely than Whites to experience serious complications or death as a result of the virus, due in part to underlying health conditions (Garg et al., 2020). From a fundamental cause

perspective, we argue that structural racism is a pre-existing pathological social condition that drives weathering processes resulting in the greater chronic disease burden among Blacks and Latinxs that elevates their risk of health complications and death from COVID-19. As noted above, theory and empirical data show that numerous manifestations of structural racism across social, economic, political and judicial systems are interrelated and lead to racial/ethnic health inequalities via an array of replaceable mechanisms, including unequal access to socioeconomic and flexible resources as well as exposure to risk factors such as environmental toxins, discrimination and other social stressors (Gee & Ford, 2011; Sewell, 2016). These structurallyrooted inequalities accumulate across domains, generations, and the life course, leading to characterized by Black and Latinx adults experiencing greater weathering processes physiological dysregulation, inflammation, and accelerated biological aging, vis-à-vis Whites (Crimmins & Seeman, 2004; Geronimus, Hicken, Keene, & Bound, 2006; Goosby, Cheadle, & Mitchell, 2018). For example, research shows that racism-related adversity and stressors result in increased activity in the sympathetic nervous system (e.g., increases in blood pressure) and the hypothalamic-pituitary-adrenal axis (e.g., elevated circulating hormone levels); when these physiological stress responses are repeatedly activated they lead to increased risks for an array of health conditions (Geronimus et al., 2006; Goosby et al., 2018; Miller, Chen, & Parker, 2011).

Thus, it is not surprising that older Black and Latinx adults (1) have more underlying health conditions than Whites (e.g. cardiovascular disease, diabetes, hypertension, chronic lung disease, and obesity); (2) experience health deterioration earlier in life; and (3) experience steeper health declines with age that results in a higher burden of disease (Brown, 2018; Garcia, Garcia, & Ailshire, 2018; Garcia, Garcia, Chiu, Raji, & Markides, 2018). These weathering processes are key mechanisms thorough which cumulative exposure to racism over the life

course "gets under the skin," undermining the health of older Black and Latinx adults and, in turn, leading to their disproportionately high rates of mortality from COVID-19 related to pre-existing health conditions.

Racial/Ethnic Disparities in Health Care Access and Quality

Unequal health care access and quality place older racial/ethnic minorities at heightened risk of health problems arising from the COVID-19 outbreak (Laster Pirtle, 2020). Given their overrepresentation in low-wage jobs that lack health benefits, older racial/ethnic minorities are less likely than Whites to have employer-provided health insurance, creating significant barriers to accessing and affording medical care (Brown, 2018). When Blacks and Latinxs navigate past these barriers and access the health care system, they often receive lower quality of care than Whites due to both structural inequalities and physician bias (Smedley, Stith, & Nelson, 2003). In addition, residential segregation shapes the distribution of patients across hospitals such that the worst hospitals (in terms of quality and cost) care for double the proportion of older Black patients as the best hospitals (Jha, Orav, & Epstein, 2011). Studies also show that minorities have longer waiting times before seeing a provider, and are less likely to have their pain appropriately diagnosed and effectively treated due to structural constraints, racialized stereotypes, and false beliefs regarding genetic differences on the part of health care providers (Hoffman, Trawalter, Axt, & Oliver, 2016). Such delays and ineffectiveness in diagnosis and treatment can prove deadly for minority COVID-19 patients who may be in a fragile state of health. Finally, ethical guidelines for the allocation of scarce medical resources during the pandemic will likely exacerbate existing racial inequalities in quality of care. Recommendations published in the New England Journal of Medicine suggest "giving priority to younger patients and those with fewer

coexisting conditions" (Emanuel et al., 2020). This practice would disproportionately harm older racial/ethnic minorities given their higher rates and earlier onset of chronic conditions.

Conclusion

While the ongoing COVID-19 pandemic is an unprecedented crisis, the racial/ethnic health inequalities it has exposed are long-standing and deeply rooted in American society. Increased risk of exposure to the virus, weathering processes, and reduced health care quality and access are key proximate mechanisms that explain *how* the COVID-19 outbreak is disproportionately harming older Black and Latinx adults. However, understanding *why* these disparities are produced and maintained requires a recognition that structural racism—in its myriad manifestations—is a fundamental cause of health disparities. This knowledge presents both challenges and opportunities for researchers and policymakers as they seek to address the needs of older adults.

Several immediate steps can be taken to lessen the burden of COVID-19 in Black and Latinx communities. First, state and local public health agencies must place testing and triage centers in minority neighborhoods to help reduce the racial/ethnic gap in COVID-19 cases and deaths. Second, governments need to provide economic relief directly to individuals (and households), which is particularly important for the financial security of older Black and Latinx adults given that they have less wealth than older Whites to cushion the economic shock of the pandemic (Brown, 2016). Third, workers deemed "essential" should be provided personal protective equipment, paid leave, hazard pay and health care. Fourth, health care organizations must ensure that racial bias and seemingly "race-neutral" policies and practices do not have a disparate impact on older racial/ethnic minorities (Ray, 2019). Fifth, in order to understand how

the pandemic impacts vulnerable subpopulation groups, it is imperative that federal, state, and local governments collect and release comprehensive data on the number of confirmed COVID-19 cases and deaths by race/ethnicity and age across a range of sociodemographic characteristics (e.g., nativity, country of origin, age of migration, and gender) which are known to individually and collectively shape health and mortality outcomes (Arias, Johnson, & Vera, 2020; Brown, 2018; M. A. Garcia et al., 2018; Reyes & Garcia, 2019).

A key insight from Fundamental Cause Theory is that, due to shifting and replaceable intervening mechanisms, minority communities will continue to bear a disproportionate burden of suffering and excess death before, during, and after public health crises—unless structural racism is adequately addressed (Laster Pirtle, 2020). In order to address structural racism, scholars have proposed a number of bold actions such as criminal justice reform, a federal jobs guarantee, reparations, universal health care, and desegregation of schools, jobs and neighborhoods. This is consistent with the growing recognition that dismantling structural racism through transformative actions across societal domains is essential for achieving population health equity.

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References

- Arias, Elizabeth, Johnson, Norman J, & Vera, Betzaida Tejada. (2020). Racial disparities in mortality in the adult hispanic population. *SSM-Population Health*, 100583. doi: https://doi.org/10.1016/j.ssmph.2020.100583
- Bialek, Stephanie, Boundy, Ellen, Bowen, Virginia, Chow, Nancy, Cohn, Amanda, & Dowling, Nicole. (2020). Severe outcomes among patients with coronavirus disease 2019 (COVID-19)—United States, February 12–March 16, 2020. *MMWR Morb Mortal Wkly Rep*, 69(12), 343-346. doi: http://dx.doi.org/10.15585/mmwr.mm6912e2
- Boen, Courtney. (2019). Death by a Thousand Cuts: Stress Exposure and Black—White Disparities in Physiological Functioning in Late Life. *The Journals of Gerontology: Series B.* doi: https://doi.org/10.1093/geronb/gbz068
- Bonilla-Silva, Eduardo. (1997). Rethinking racism: Toward a structural interpretation. *American Sociological Review*, 465-480. doi: 10.2307/2657316
- Brown, Tyson H. (2016). Diverging fortunes: Racial/ethnic inequality in wealth trajectories in middle and late life. *Race and Social Problems*, 8(1), 29-41. doi: https://doi.org/10.1007/s12552-016-9160-2
- Brown, Tyson H. (2018). Racial Stratification, Immigration, and Health Inequality: A Life Course-Intersectional Approach. *Social Forces*. doi: https://doi.org/10.1093/sf/soy013
- Cagney, Kathleen A, Browning, Christopher R, & Wen, Ming. (2005). Racial disparities in self-rated health at older ages: what difference does the neighborhood make? *The Journals of Gerontology Series B: Psychological Sciences and Social Sciences*, 60(4), S181-S190. doi: https://doi.org/10.1093/geronb/60.4.S181

- CDC. (2020a). Preventing the Spread of COVID-19 in Retirement Communities and

 Independent Living Facilities (Interim Guidance). Retrieved April 18, 2020, from

 https://www.cdc.gov/coronavirus/2019-ncov/community/retirement/guidance-retirement-response.html#
- Centers for Disease Control and Prevention. (2020b). Weekly updates by select demographic and geographic characteristics: Provisional death counts for Coronavirus (COVID-19) (May 28, 2020). https://www.cdc.gov/nchs/nvss/vsrr/covid_weekly/index.htm#Race_Hispanic.
- Centers for Disease Control and Prevention (2020c). COVID-19 in Racial and Ethnic Minority Groups. https://www.cdc.gov/coronavirus/2019-ncov/need-extra-precautions/racial-ethnic-minorities.html
- Crimmins, Eileen M, & Seeman, Teresa E. (2004). Integrating biology into the study of health disparities. *Population and Development Review*, *30*, 89-107.
- Dong, Ensheng, Du, Hongru, & Gardner, Lauren. (2020). An interactive web-based dashboard to track COVID-19 in real time. *The Lancet Infectious Diseases*. doi: https://doi.org/10.1016/S1473-3099(20)30120-1
- Emanuel, Ezekiel J, Persad, Govind, Upshur, Ross, Thome, Beatriz, Parker, Michael, Glickman, Aaron, . . . Phillips, James P. (2020). Fair allocation of scarce medical resources in the time of Covid-19: Mass Medical Soc.
- Feagin, Joe, & Bennefield, Zinobia. (2014). Systemic racism and US health care. *Social science & medicine*, 103, 7-14. doi: https://doi.org/10.1016/j.socscimed.2013.09.006
- Ferraro, Kenneth F, Kemp, Blakelee R, & Williams, Monica M. (2017). Diverse aging and health inequality by race and ethnicity. *Innovation in Aging, 1*(1), igx002. doi: https://doi.org/10.1093/geroni/igx002

- Garcia, Catherine, Garcia, Marc A, & Ailshire, Jennifer A. (2018). Sociocultural variability in the Latino population: Age patterns and differences in morbidity among older US adults.

 Demographic Research, 38, 1605. doi: https://doi.org/10.4054/DemRes.2018.38.52
- Garcia, Marc A., Garcia, Catherine, Chiu, Chi-Tsun, Raji, Mukaila, & Markides, Kyriakos S. (2018). A Comprehensive Analysis of Morbidity Life Expectancies Among Older Hispanic Subgroups in the United States: Variation by Nativity and Country of Origin.

 Innovation in Aging, 2(2). doi: doi:10.1093/geroni/igy014
- Garg, Shikha, Kim, Lindsay, Whitaker, Michael, O'Halloran, Alissa, Cummings, Charisse, Holstein, Rachel, . . . Chai, Shua J. (2020). Hospitalization Rates and Characteristics of Patients Hospitalized with Laboratory-Confirmed Coronavirus Disease 2019—COVID-NET, 14 States, March 1–30, 2020. MMWR. Morbidity and Mortality Weekly Report, 69. doi: http://dx.doi.org/10.15585/mmwr.mm6915e3
- Gee, Gilbert C, & Ford, Chandra L. (2011). Structural racism and health inequities: old issues, new directions. *Du Bois review: social science research on race*, 8(1), 115-132. doi: 10.1017/S1742058X11000130
- Geronimus, Arline T, Hicken, Margaret, Keene, Danya, & Bound, John. (2006). "Weathering" and age patterns of allostatic load scores among blacks and whites in the United States.

 *American journal of public health, 96(5), 826-833. doi: doi:10.2105/AJPH.2004.060749
- Girdhar, Ritika, Srivastava, Vivek, & Sethi, Sujata. (2020). Managing mental health issues among elderly during COVID-19 pandemic. *Journal of Geriatric Care and Research*, 7(1).
- Goosby, Bridget J, Cheadle, Jacob E, & Mitchell, Colter. (2018). Stress-related biosocial mechanisms of discrimination and African American health inequities. *Annual Review of*

- Sociology, 44, 319-340. doi: https://doi.org/10.1146/annurev-soc-060116-053403
- Gould, Elise, & Shierholz, Heidi. (2020). Not everybody can work from home Black and

 Hispanic workers are much less likely to be able to telework. Retrieved from

 https://www.epi.org/blog/black-and-hispanic-workers-are-much-less-likely-to-be-able-to-work-from-home/
- Hoffman, Kelly M, Trawalter, Sophie, Axt, Jordan R, & Oliver, M Norman. (2016). Racial bias in pain assessment and treatment recommendations, and false beliefs about biological differences between blacks and whites. *Proceedings of the National Academy of Sciences*, 113(16), 4296-4301. doi: https://doi.org/10.1073/pnas.1516047113
- Holshue, Michelle L, DeBolt, Chas, Lindquist, Scott, Lofy, Kathy H, Wiesman, John, Bruce, Hollianne, . . . Tural, Ahmet. (2020). First case of 2019 novel coronavirus in the United States. *New England Journal of Medicine*. doi: 10.1056/NEJMoa2001191
- Hopkins, Johns. (2020). Coronavirus Resource Center. *Im Internet (Stand: 19.04. 2020):*https://coronavirus.jhu.edu/data.
- Howard, D. L., Sloane, P. D., Zimmerman, S., Eckert, J. K., Walsh, J. F., Buie, V. C., Taylor, P. J., & Koch, G. G. (2002). Distribution of African Americans in Residential Care/Assisted Living and Nursing Homes: More Evidence of Racial Disparity? *American Journal of Public Health*, 92(8), 1272–1277. https://doi.org/10.2105/AJPH.92.8.1272
- Jha, Ashish K, Orav, E John, & Epstein, Arnold M. (2011). Low-quality, high-cost hospitals, mainly in South, care for sharply higher shares of elderly black, Hispanic, and Medicaid patients. *Health affairs*, 30(10), 1904-1911. doi: https://doi.org/10.1377/hlthaff.2011.0027

- Laster Pirtle, Whitney N. (2020). Racial Capitalism: A Fundamental Cause of Novel

 Coronavirus (COVID-19) Pandemic Inequities in the United States. *Health Education & Behavior*. doi: https://doi.org/10.1177/1090198120922942
- Massey, Douglas S, & Denton, Nancy A. (1993). *American apartheid: Segregation and the making of the underclass*: Harvard University Press.
- Miller, Gregory E, Chen, Edith, & Parker, Karen J. (2011). Psychological stress in childhood and susceptibility to the chronic diseases of aging: moving toward a model of behavioral and biological mechanisms. *Psychological bulletin*, 137(6), 959. doi: https://doi.org/10.1037/a0024768
- Millett, G. A., Jones, A. T., Benkeser, D., Baral, S., Mercer, L., Beyrer, C., ... & Sherwood, J. (2020). Assessing differential impacts of COVID-19 on Black communities. Annals of Epidemiology. https://doi.org/10.1016/j.annepidem.2020.05.003
- Nikolich-Žugich, Janko. (2018). The twilight of immunity: emerging concepts in aging of the immune system. *Nature immunology*, *19*(1), 10-19. doi: https://doi.org/10.1038/s41590-017-0006-x
- Phelan, Jo C, & Link, Bruce G. (2015). Is racism a fundamental cause of inequalities in health?

 Annual Review of Sociology, 41, 311-330. doi: https://doi.org/10.1146/annurev-soc-073014-112305
- Ray, Rashawn. (2020). Why are Blacks dying at higher rates from COVID-19? Retrieved from https://www.brookings.edu/blog/fixgov/2020/04/09/why-are-blacks-dying-at-higher-rates-from-covid-19/
- Ray, Victor. (2019). A Theory of Racialized Organizations. *American Sociological Review*, 84(1), 26-53. doi: 10.1177/0003122418822335

- Reyes, Adriana M, & Garcia, Marc A. (2019). Gender and Age of Migration Differences in Mortality Among Older Mexican Americans. doi: DOI: 10.1093/geronb/gbz038
- Rodriguez-Diaz, Carlos E., Guilamo-Ramos, Vincent, Mena, Leandro, Hall, Eric, Honermann, Brian, Crowley, Jeffrey S., . . . Millett, Gregorio A. (2020). Risk for COVID-19 infection and death among Latinos in the United States: Examining heterogeneity in transmission dynamics. *Annals of Epidemiology*. doi:

https://doi.org/10.1016/j.annepidem.2020.07.007Sewell, Abigail A. (2016). The Racism-Race Reification Process: A Mesolevel Political Economic Framework for Understanding Racial Health Disparities. *Sociology of Race and Ethnicity*, 2(4), 402-432. doi: 10.1177/2332649215626936

- Smedley, Brian D, Stith, Adrienne Y, & Nelson, Alan R. (2003). Institute of Medicine,

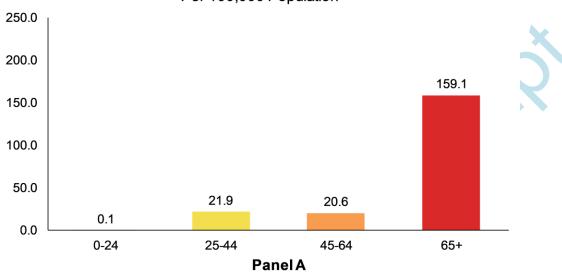
 Committee on Understanding and Eliminating Racial and Ethnic Disparities in Health

 Care. Unequal treatment: confronting racial and ethnic disparities in healthcare:

 Washington, DC: National Academies Press.
- US Bureau of Labor Statistics, Report 1082, Labor force characteristics by race and ethnicity, 2018. October 2019. https://www.bls.gov/opub/reports/race-and-ethnicity/2018/home.htm.
- Vespa, Jonathan, Lewis, Jamie M, & Kreider, Rose M. (2013). America's families and living arrangements: 2012. *Current Population Reports*, 20(2013), P570.
- Williams, David R, Lawrence, Jourdyn A, & Davis, Brigette A. (2019). Racism and health: evidence and needed research. *Annual review of public health*, 40, 105-125. doi: https://doi.org/10.1146/annurev-publhealth-040218-043750

Figure 1





COVID-19 Death Rate Among Age 65+ By Race/Ethnicity, Per 100,000 Population

